

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 26787 5/15/2001]

[Docket No. 99-NE-49-AD; Amendment 39-12228; AD 2000-03-03 R1]

Airworthiness Directives; General Electric Company CF34 Series Turbofan Engines

RIN 2120-AA64

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment revises an existing airworthiness directive (AD), applicable to General Electric Company CF34 series turbofan engines, that currently requires revisions to the Engine Maintenance Program specified in the manufacturer's Instructions for Continued Airworthiness (ICA) for General Electric Company (GE) CF34 series turbofan engines. Those revisions require enhanced inspection of selected critical life-limited parts at each piece-part exposure. The existing AD also requires that an air carrier's approved continuous airworthiness maintenance program incorporate these inspection procedures. This amendment removes inspection requirements for parts removed from engines mounted on-wing. This amendment is prompted by the high removal rate and subsequent piece-part exposure of fan disks due to certain maintenance procedures. This additional exposure has resulted in fan disk focused inspection rates that exceed the intent of the focused inspection initiative. The actions specified by this AD are intended to prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane.

DATES: Effective June 19, 2001.

ADDRESSES: The information referenced in this AD may be examined at the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., 7th Floor, suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Kevin Donovan, Aerospace Engineer Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7743, fax (238) 238-7199.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by revising AD 2000-03-03, Amendment 39-11560 (65 FR 5759), which is applicable to General Electric Company CF34 series turbofan engines, was published in the FEDERAL REGISTER on August 18, 2000 (65 FR 50468). The action removed inspection requirements for parts removed from engines mounted on-wing.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Change to Aircraft Model Designation

One comment asks that the Applicability Section be changed to reflect the Department of Transportation (DOT) aircraft model designation rather than the Bombardier aircraft model designation.

The FAA agrees. The model designation has been changed to reflect the DOT designation.

Remove ASB Reference

A comment requests that the FAA remove the reference to Alert Service Bulletin (ASB) 72-A0103 contained in subparagraph (A) of the change to the instructions for continue airworthiness (ICA's).

The FAA agrees. The language of the ASB has subsequently been incorporated into the manual cited, SEI-756, chapter 72-00-00. Therefore, reference to the ASB in the required change to the ICA's is not needed.

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes described previously. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Regulatory Impact

This rule does not have federalism implications, as defined in Executive Order 13132, because it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Accordingly, the FAA has not consulted with state authorities prior to publication of this rule.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES".

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§39.13 - [Amended]

2. Section 39.13 is amended by removing Amendment 39-11560 (65 FR 5759, February 7, 2000), and by adding a new airworthiness directive (AD), Amendment 39-12228 to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

REVISION

2000-03-03 R1 General Electric Company: Amendment 39-12228. Docket 99-NE-49-AD.
Revises AD 2000-03-03, Amendment 39-11560.

Applicability: General Electric Company (GE) CF34-3A1 and -3B1 series turbofan engines, installed on but not limited to Bombardier Canadair CL 600-2B19(RJ) aircraft.

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must use the authority provided in paragraph (c) to request approval from the FAA. This approval may address either no action, if the current configuration eliminates the unsafe condition, or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any engine from the applicability of this AD.

Compliance: Required as indicated, unless accomplished previously.

To prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane, accomplish the following:

Inspections

(a) Within the next 30 days after the effective date of this AD, revise the CF34 Engine Maintenance Program, Chapter 5-21-00, of the GE CF34 Series Turbofan Engine Manual, SEI-756. For air carrier operations, revise the approved continuous airworthiness maintenance program, by adding the following:

"9. CF34-3A1 and CF34-3B1 Engine Maintenance Program – Mandatory Inspection Requirements.

(A) This procedure is used to identify specific piece-parts that require mandatory inspections that must be accomplished at each piece-part exposure using the applicable Chapters referenced in Table 804 for the inspection requirements. The inspection requirements listed in Table 804 are not required for any piece-part exposure resulting when the engine remains on-wing while performing maintenance practice, special procedure Number 41 listed in SEI-756, chapter 72-00-00.

(B) Piece-part exposure is defined as follows: Note: Fan disk piece-part includes the fan disk with the 56 fan pin bushings installed.

(1) For engines that utilize the "On Condition" maintenance requirements:

The part is considered completely disassembled to the piece-part level when done in accordance with the disassembly instructions in the GEAE authorized overhaul Engine Manual, and the part has accumulated more than 100 cycles-in-service since the last piece-part opportunity inspection, provided that the part was not damaged or related to the cause for its removal from the engine.

(2) For engines that utilize the “Hard Time” maintenance requirements: The part is considered completely disassembled when done in accordance with the disassembly instructions used in the “Minor Maintenance” or “Overhaul” instructions in the GEAE engine authorized Engine Manual, and the part has accumulated more than 100 cycles-in-service since the last piece-part opportunity inspection, provided that the part was not damaged or related to the cause for its removal from the engine.

C. Refer to Table 804 below for the mandatory inspection requirements.

TABLE 804. MANDATORY INSPECTION REQUIREMENTS

| Part Nomenclature | Manual/Chapter Section/Subject | Mandatory Inspection |
|--|-----------------------------------|---|
| Fan Disk (all) | 72-21-00, INSPECTION | All areas (FPI) ¹ Bores (ECI) ² |
| Stage 1 high pressure turbine (HPT) Rotor Disk (all) | 72-46-00, INSPECTION | All areas (FPI) ¹ Bores (ECI) ² Boltholes (ECI) ² Air Holes (ECI) ² |
| Stage 2 HPT Rotor Disk (all) | 72-46-00, INSPECTION | All Areas (FPI) ¹ Bores (ECI) ² |
| (a) Boltless Rim Configuration | | Boltholes (FPI) ¹ Air Holes (FPI) ¹ |
| (b) Bolted Rim Configuration | | Boltholes (ECI) ² Air Holes (ECI) ² |
| HPT Rotor Outer Torque Coupling (all) | 72-46-00, INSPECTION | All areas (FPI) ¹ Bore (ECI) ² |
| ¹ FPI = Fluorescent Penetrant Inspection Method | | |
| ² ECI = Eddy Current Inspection” | | |

(b) Except as provided in paragraph (c) of this AD, and notwithstanding the provisions of section 43.16 of the Federal Aviation Regulations (14 CFR 43.16), these mandatory inspections shall be performed only in accordance with the CF34 Engine Maintenance Program, Chapter 5-21-00, of the General Electric Company, CF34 Series Turbofan Engine Manual, SEI-756.

Alternative Method of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector (PMI), who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the ECO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Continuous Airworthiness Maintenance Program

(e) FAA-certificated air carriers that have an approved continuous airworthiness maintenance program in accordance with the record keeping requirement of § 121.369 (c) of the Federal Aviation Regulations [14 CFR 121.369 (c)] must maintain records of the mandatory inspections that result from revising the CF34 Engine Maintenance Program and the air carrier's continuous airworthiness program. Alternately, certificated air carriers may establish an approved system of record retention that provides a method for preservation and retrieval of the maintenance records that include the inspections resulting from this AD, and include the policy and procedures for implementing this alternate method in the air carrier's maintenance manual required by § 121.369 (c) of the Federal Aviation Regulations [14 CFR 121.369 (c)]; however, the alternate system must be accepted by the appropriate PMI and require the maintenance records be maintained either indefinitely or until the work is repeated. Records of the piece-part inspections are not required under § 121.380 (a) (2) (vi) of the Federal Aviation Regulations [14 CFR 121.380 (a) (2) (vi)]. All other operators must maintain the records of mandatory inspections required by the applicable regulations governing their operations.

Note 3: The requirements of this AD have been met when the engine manual changes are made and air carriers have modified their continuous airworthiness maintenance plans to reflect the Engine Maintenance Program requirements specified in the GE CF34 Series Turbofan Engine Manual.

This amendment becomes effective on June 19, 2001.

FOR FURTHER INFORMATION CONTACT: Kevin Donovan, Aerospace Engineer Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7743, fax (238) 238-7199.

Issued in Burlington, Massachusetts, on May 7, 2001.

Francis A. Favara, Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.